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(72) Inventors; and

(75) Inventors/Applicants (for US only): LEE, Dong-hee [KR/KR]; Bando-mansion 410, 252-1 Choeup-dong, Busanjin-gu, Busan 614-871 (KR). KIM, Tae-hoon [KR/KR]; 264-8 Bugok-dong, Geumjeong-gu, Busan 609-320 (KR). HWANG, In-taek [KR/KR]; 115-303 Hanbit Apt. Eoeun-dong, Yuseong-gu, Daejeon 305-755 (KR). CHO, Kwang-yun [KR/KR]; 383-21 Doryong-dong, Yuseong-gu, Daejeon 305-340 (KR).

(74) Agents: KIM, Dong-jin et al.; Marcopolo Bldg 3F, 720-20 Yeoksam-dong, Kangnam-gu, Seoul 135-080 (KR).

(71) Applicants (for all designated States except US): GENOMINE, INC. [KR/KR]; Vneture Bldg 306 Pohang Techno Park, Pohang, Kyungbuk 790-784 (KR). KRICT(Korea Research Institute of Chemical Technology) [KR/KR]; 100 Jang-dong, Yusong, Taejon 305-600 (KR).

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[Continued on next page]

(54) Title: POLYPEPTIDE PARTICIPATING IN PYRIDOXINE BIOSYNTHESIS, A POLYNUCLEOTIDE CODING THE POLYPEPTIDE AND THOSE USES

At5g10410 -----MEG---TGVVAVYVNGAITEAK-KSPFSVKVGLAQLRGGVIMDVVNAEQARIAEE 52
At2g38230 -----MAG---TGVVAVYVNGAITEAK-KSPFSVKVGLAQLRGGVIMDVVNAEQARIAEE 53
At3g16050 MADQAMTDQDQAVTLYSGTATIDAKKNHPPSVKVLGAQLRGGVIMDVVNAEQARIAEE 60
snz3 -----MS-----EFKVKVTGLAQLRGGVIMDVVTPAQIAIAER 33
snz2 -----MS-----EFKVKVTGLAQLRGGVIMDVVTPAQIAIAER 33
snz1 -----MTG-----EDFKIKSGLAQLRGGVIMDVVTPAQIAIAER 35
* * * * *
At5g10410 AGACAVMALERVADIRAGGGVARMSPDPQMIKEIKQAVTIPVMAKARIGHFVEAQILEAI 112
At2g38230 AGACAVMALERVADIRAGGGVARMSPDPQMIKEIKQAVTIPVMAKARIGHFVEAQILEAI 113
At3g16050 AGACSVVISD----FVRSRGGVRRMPDPVLIKEVKRAVSPVPMARARVGHFVEAQILESL 116
snz3 AGACAVMALERIPADMRKSGQVCRMSDPMIKEIMEAVSIPVMAKVRIGHFVEAQILEEL 93
snz2 AGACAVMALERIPADMRKSGQVCRMSDPMIKEIMEAVSIPVMAKVRIGHFVEAQILEEL 93
snz1 SGACAVMALESIPADMRKSGQVCRMSDPMIKEIMEAVSIPVMAKVRIGHFVEAQILEAL 95
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At2g38230 GVDYVDESEVLTLEADHINKHNFRIFFVCGCRNLGEALRRIREGAAMIRTKG-EAGTG 172
At3g16050 AVDYIDSEIISVADDDHFINKHNFRIFFVCGCRNLGEALRRIREGAAMIRTKG-EAGTG 176
snz3 QVDYIDSEVLTADWTHIEKHNFVFPVCGAKDLGEALRRIREGAAMIRTKG-EAGTG 152
snz2 QVDYIDSEVLTADWTHIEKHNFVFPVCGAKDLGEALRRIREGAAMIRTKG-EAGTG 152
snz1 EVDYIDSEVLTADWTHIEKHNFVFPVCGAKDLGEALRRIREGAAMIRTKG-EAGTG 154
* * * * *
At5g10410 NIIEAVRHVRSVNGDIRVLN--MDDDEVFTYAKKLAAPYDLVMTKQLGRPLVVFQFAAG 229
At2g38230 NVVEAVRHVRSVNGAIRLLRS--MDDDEVFTYAKKLAAPYDLVMTKQLGRPLVVFQFAAG 230
At3g16050 NIAETVKNVRSVLMGEVRLN--MDDDEVFTYAKKLAAPYDLVMTKQLGRPLVVFQFAAG 234
snz3 DVSEAVKHITIKAEIQYKKNLKTESDFAAKATELRVPVLLKTLSEGLKPLVVFQFAAG 212
snz2 DVSEAVKHITIKAEIQYKKNLKTESDFAAKATELRVPVLLKTLSEGLKPLVVFQFAAG 212
snz1 DVSEAVKHITIRITEIKACQ--LKSDDIDAKVAREMRVPVSLKDLVLEKGLPLVVFQFAAG 213
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At5g10410 GVATPADAALMMLGCDGVFVGSIGFSSDPFARRARAIVQAVTHYSDEPLVEVSCGLGE 289
At2g38230 GVATPADAALMMLGCDGVFVGSIGFSSDPFARRARAIVQAVTHYSDEPLVEVSCGLGE 290
At3g16050 GITTADAALMMLGCDGVFVGSIGFSSDPFARRARAIVQAVTHYSDEPLVEVSCGLGE 294
snz3 GVATPADAALMMLGCEGVFVGSIGFSSDPFARRARAIVQAVTHYSDEPLVEVSCGLGE 272
snz2 GVATPADAALMMLGCEGVFVGSIGFSSDPFARRARAIVQAVTHYSDEPLVEVSCGLGE 272
snz1 GVATPADAALMMLGCDGVFVGSIGFSSDPFARRARAIVQAVTHYSDEPLVEVSCGLGE 273
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At5g10410 AMVGINLNDKVERFANRSE----- 309
At2g38230 AMVGLNLD--KVERFANRSE----- 309
At3g16050 AMESLNVGRDRIQDFGQGSV----- 314
snz3 LMGGISIQSINEAGGKNGARLSEIGW 298
snz2 LMGGISIQSINEAGGKNGARLSEIGW 298
snz1 LMGGVIESISHAS--NGVRLSEIGW 297
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(57) Abstract: The present invention discloses a polypeptide participating in pyridoxine biosynthesis, a polynucleotide coding the polypeptide and those uses. Particularly, this present invention discloses a polypeptide participating in pyridoxine biosynthesis, a polynucleotide coding the polypeptide, a method for inducing plant growth inhibition, a method for screening a compound inducing plant growth inhibition, and composition for inducing plant growth inhibition which comprises the compound obtained by the screening method.

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